

## ABSTRACT

A system and method for dispensing a sample using a self-dispensing system including a sample storage device, a dispensing mechanism, and a driving mechanism for driving the dispensing mechanism. The dispensing mechanism is formed as part of and is in dispensing communication with the sample storage device. Preferably the dispensing mechanism is a positive displacement type dispensing mechanism and includes an inlet valve, an actuator, and an outlet valve. The driving mechanism may be positioned internal or external to the dispensing mechanism and drives the dispensing mechanism thereby inducing a flow of a measured quantity of the sample into or out of the storage device. Preferably, the dispensing mechanism is relatively inexpensive and is disposable. The system and method may include an individual dispensing mechanism having a single storage device and a single dispensing mechanism, or alternatively, may include a plurality of storage devices each having a corresponding dispensing mechanism arranged in, for example, a plate. The self-dispensing system of the present invention is preferably implemented in an automated system having one or more robots for positioning the samples to be dispensed. The system and method provide for precision and reproducible dispensing of a sample with improved efficiency and throughput by eliminating the need for tip changes and washes between each sample transfer operation.